specification. Reconsideration based on the above amendments and following remarks is respectfully requested.

I. The Claims Define Allowable Subject Matter

The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(a) as unpatentable over EP 0 74 598 A1 (hereinafter "EP (598)") or JP 7-38360 A (hereinafter "JP (360)"); and claims 1 and 2 under 35 U.S.C. §103(a) as unpatentable over EP (598) or JP (360). The rejections are respectfully traversed.

As described on page 4, line 27 - page 5, line 9 of the present specification, the present invention provides an advantage that "in particular, in the production of recent surface acoustic wave filters having a very small electrode width (1 μm or less), if there is used a piezoelectric oxide single crystal wafer of which the number of particles adhering to a surface and having a size of 1 μm or more is 85 or less per mm^2, surface acoustic wave filters can be produced with a high yield of at least 50% or more." The applied art cannot provide this advantage.

EP (598) and JP (360) do not disclose a piezoelectric oxide single crystal wafer, wherein the number of particles adhering to a surface of the wafer and having a size of 1 μm or more is 85 or less per mm^2, as recited in claim 1.

Instead, EP (598), as described in its claim 1 and the like, discloses a composite substrate manufactured by abutting a mirror finished principal surface of a first substrate against a mirror finished principal surface of a second substrate having a thermal expansion coefficient different from that of the first substrate, and applying a two-step heat treatment to the abutted substrates.

Further, JP (360), as described in its Abstract, discloses a composite substrate manufactured by cleaning and superposing the surface of two pieces of piezoelectric body substrates, and thereafter, joining them directly by applying a voltage to the joining boundary.

First, on page 3 of the Office Action asserts as follows: The prior art acknowledged by applicant as well as Europe (598) and Japan (360) teach that it is well known to strive for as clean a surface as possible. Any limits established would be dependent on a particular given station. The limit would also be determined by the practical common sense, cost-benefit considerations. Thus, the selection or establishment of cleanliness limits (in terms of particles) would have been obvious to one of ordinary skill in the art.

However, the piezoelectric oxide single crystal wafer of the present invention, wherein the number of particles adhering to a surface of the wafer and having a size of 1 μm or more is 85 or less per mm^2, is not disclosed in the references at all, and has not been known in the prior art.

For example, col. 5, lines 41-42 of EP (598) discloses that two substrates are thoroughly washed by deionized water. Also, the Abstract of JP (360) discloses that each surface to be joined is washed enough and minute stuck objects, etc., are eliminated as much as possible. However, these references neither teach nor suggest any size or number of particles adhering to a surface of the wafer.

Further, page 3, lines 17-21 of the present specification discloses as follows with regard to the admitted prior art: "it is considered desirable that particles adhered to wafer surfaces should be made few as much as possible", i.e., it is well known to strive for as clean a surface as possible, as pointed out by the Examiner. However, it is also described subsequently that "allowable size and number of such particles have not been elucidated yet". Namely, even though the cited references or the description concerning prior art of the present invention indicate that it is considered desirable that particles adhering to wafer surfaces should be made few as much as possible, specific allowable size and number of such particles have not been elucidated.

Furthermore, as disclosed on page 2, line 22 - page 3, line 3 of the present specification, "in piezoelectric oxide single crystal wafers manufactured by conventional methods as those for surface acoustic wave filters, many particles remain on wafer surfaces and therefore fine electrode formation may not be sufficiently attained in the element fabrication process. Thus, the number of good devices obtained from one wafer, i.e., yield, may be reduced." Namely, the piezoelectric oxide single crystal wafer of the present invention, wherein the number of particles adhering to a surface of the wafer and having a size of 1 μm or more is 85 or less per mm^2, has not been accomplished conventionally, and thus the present invention is novel.

Second, the features of the present invention cannot be derived from the applied art. Inherently, the cleaning disclosed in the applied art, as clear from the description of the above abstract of JP (360), is performed in order to eliminate impurities on each surface to be joined of two substrates and improve its joining strength. Further, in col. 15, lines 36-59 of EP (598), a composite substrate shown in Fig. 6 in which electrodes are formed on a quartz substrate 11 is explained. However, there is no teaching or suggestion that particles adhering to the surface on which electrodes are to be formed should be limited to what extent, still less the number of particles adhering to the surface and having a size of 1 μm or more should be 85 or less per mm^2. Namely, to one of ordinary skill in the art, the references only teach the cleaning on the surface to be joined of the composite substrates, but cannot teach specific size or number of particles adhering to the surface on which electrodes are to be formed.

The present invention has been accomplished as described on page 4, lines 12-27 of the present specification as follows: "The inventors of the present invention found that, in a piezoelectric oxide single crystal wafer after cleaning, there was a correlation between the number of particles adhering to the wafer surface and the yield obtained in the element fabrication utilizing the wafer. Then, they assiduously studied in order to achieve the

aforementioned object, and as a result, they found that, if a piezoelectric oxide single crystal wafer had particles adhering to a surface of the wafer and having a size of 1 μm or more in a number of 85 or less per mm^2, it satisfactorily allowed fine electrode formation in the element fabrication process and hence enabled device production with good yield."

As described above, the feature of the present invention, that is, the number of particles adhering to a surface of the wafer and having a size of 1 μm or more is 85 or less per mm^2, could be contrived from a result of the above findings and assiduous study. Therefore, the present invention cannot be derived from the practical common sense or cost-benefit considerations as the Examiner states or the only abstract descriptions as in JP (360) that the surfaces to be joined are washed enough and minute stuck objects, etc., are eliminated as much as possible.

Moreover, the piezoelectric oxide single crystal wafer of the present application provides the advantage that when devices are manufactured by forming electrodes having the width of 1 μm or less on its surface, for example, its production yield of at least 50% or more can be achieved. And thus, it obviously has patentability (see data in Fig. 1 of the present invention).

For at least these reasons, it is respectfully submitted that claim 1 is distinguishable over the applied art. Claims 2-4, which depend from claim 1, are likewise distinguishable over the applied art for at least the reasons discussed as well as for the additional features they recite. Withdrawal of the rejections under 35 U.S.C. §102(a) and 35 U.S.C. §103(a) is respectfully requested.

II. Conclusion

For at least the reasons discussed above, it is respectfully submitted that this application is in condition for allowance.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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